

INPUT DEVICE, BIOSENSOR, PROGRAM, COMPUTER-READABLE MEDIUM, AND MODE SETTING METHOD

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is a continuation application of International Application PCT/JP2015/003561 filed on Jul. 14, 2015 and designated the U.S., the entire contents of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] The present invention relates to an input device, a biosensor, a program, a computer-readable medium, and a mode setting method for inputting a signal representing motions of a user that are detected by a sensor attached to the user.

BACKGROUND ART

[0003] In PTL 1, a method of increasing varieties of switchable modes by registering, in advance, blink patterns each expressed by feature quantities including the length of time during which an eye is closed and the length of time during which the eye is opened in a blink and detecting whether or not a user has reproduced a blink of the same pattern as one of the pre-registered blink patterns is disclosed.

CITATION LIST

Patent Literature

[0004] PTL 1: JP 2013-214073 A

SUMMARY OF INVENTION

Technical Problem

[0005] However, in a technology described in PTL 1, since motion patterns of blinking are registered in advance, it requires a lot of work to make every user register his/her motion pattern of blinking. Furthermore, it is not easy for a user to accurately reproduce the same blinking motion as the blinking motion that the user himself/herself has registered. On the other hand, in a method of defining a motion pattern of blinking that is common to all users in advance, the users are requested to reproduce the length of the motion time of the registered motion accurately, which leads to a difficulty in achieving the method.

[0006] That is, the above-described conventional technology has a problem in that there is a high possibility of causing an error in determining whether or not to set a mode of a control target to be controlled because reproducing a pre-registered motion pattern of blinking is not easy.

[0007] An object of the present invention is to provide an input device, a biosensor, a program, a computer-readable medium, and a mode setting method that enable errors in determining whether or not to set a mode of a control target to be controlled to be reduced.

Solution to Problem

[0008] In order to achieve the object mentioned above, according to one aspect of the present invention, there is provided an input device including: a sensor signal acquisition unit configured to acquire a sensor signal; a waveform comparison unit configured to compare waveforms during two or more periods of the sensor signal; and a mode setting unit configured to, on the basis of a result of comparison by the waveform comparison unit, set a mode of a control target device to be controlled.

[0009] In order to achieve the object mentioned above, according to one aspect of the present invention, there is provided a program making a computer function as the input device according to the aspect of the present invention described above.

[0010] In order to achieve the object mentioned above, according to one aspect of the present invention, there is provided a computer-readable medium including the program according to the aspect of the present invention described above.

[0011] In order to achieve the object mentioned above, according to one aspect of the present invention, there is provided a mode setting method including: comparing waveforms during two or more periods of a sensor signal; and on the basis of a result of comparison between the waveforms, setting a mode of a control target device to be controlled.

[0012] In order to achieve the object mentioned above, according to one aspect of the present invention, there is provided a biosensor that is attached to a living body and acquires biological information from the living body, including: a sensor signal acquisition unit configured to acquire a sampled sensor signal; a waveform comparison unit configured to compare waveforms during two or more periods of the sensor signal; and a mode setting unit configured to, on the basis of a result of comparison by the waveform comparison unit, set a mode of a control target device to be controlled.

Advantageous Effects of Invention

[0013] Respective modes of the present invention enable errors in determining whether or not to set a mode of a control target to be controlled to be reduced.

BRIEF DESCRIPTION OF DRAWINGS

[0014] FIG. 1 is a functional block diagram illustrative of an input device according to a first exemplary embodiment of the present invention;

[0015] FIGS. 2A to 2C are diagrams which describe the first exemplary embodiment of the present invention and illustrate combinations of rhythm and tempo;

[0016] FIG. 3 is a diagram for a description of the first exemplary embodiment of the present invention and illustrative of nine variations that are definable in accordance with motion time and the number of repeats of a motion;

[0017] FIG. 4 is a diagram for a description of the first exemplary embodiment of the present invention and a flowchart illustrative of an example of a flow of a waveform comparison method using a correlation coefficient in a waveform comparison unit 102;

[0018] FIG. 5 is a functional block diagram illustrative of an input device according to a second exemplary embodiment of the present invention;

[0019] FIG. 6 is a diagram for a description of the second exemplary embodiment of the present invention and a graph illustrative of a sign pattern;